

FINAL PROCEEDINGS

**INTERNATIONAL AVIATION
TRAINING SYMPOSIUM**

September 28-30, 1999

TABLE OF CONTENTS

Agenda	v
Technical Session #1 – Training in the 21st Century	
Human Factors Support to Training for Future Air Traffic Controllers	1
Human Resources and Training Needs Task Force (CNS/ATM)	11
Development of Safety Management for Civil Aviation of China	21
Technical Session #2 – Key Managerial Aspects to Effective Training Programs	
Civil Aviation Training in Brazil	31
Centre of Excellence in Air Traffic Management (ATM) Training	41
Intricacies of Formulating Aviation Training Strategies in a Community of Developing Economies; The Case of SADC	51
Raising the Bar of Performance in the FAA: Applying a Systems Thinking Approach	61
Technical Session #3 – Funding Strategies to Support Aviation Training	
Funding Strategies for China’s Civil Aviation and Education Training	71
Training for the Future CNS/ATM	81
The IATA ATC Enhancement & Financing Service and Funding Aviation Training	91
Technical Session #4 – Regional Training Programs: Facility, Instructor and Materials Resource Sharing	
Total Teamwork in Training Development	101
Using a Global Team to Improve International Aviation Safety Oversight	111
Meeting the Global Need for Qualified Civil Aviation Personnel through International Cooperations: An ICAO Perspective	121
Creating Regional Training Programs: A Less Developed Countries’ Perspective	131
Establishing International Training Partnerships (From An Air Traffic Services Perspective)	141
Technical Session #5 – Specific Applications in Training Technologies, Training Methodologies, Aviation Research, Pilot Training & English Language Training	
Session 5a: Training Technologies	
Toward a National Training Program in Aviation Weather; A Major Step Toward Safer Skies	151
Developing Holistic Technology-Based Training Programs	161
An Overview of the Federal Aviation Administration’s Interactive Video Teletraining Program	171
Simulation Coupled with CBT Creating a Comprehensive Training Tool that Increases Transfer	181

Session 5b: Training Methodologies	
Service Quality Improvements at Community Aerodrome Radio Stations in the Northwest Territories	191
Aerotechnical Development and Pattern of Tertiary Education Envisaged for 21 st Century Chinese Aviation	201
Training Issues Associated with the Advanced General Aviation Transportation Experiment (AGATE) & Small Aircraft Transportation System (SATS) Programs	211
Innovative Training Programs in Aviation Medicine	221
Session 5c: Aviation Research	
Quality Management in Aviation Training	231
Using an Internet-Based Decision Research System in Aviation Training Research	241
An Evaluation of Airplane Upset Recovery Training Programs	251
Basic English Language Proficiency for International ATC	261
Session 5d: Pilot Training	
Approaches to Learning: Is there a Better Way to Prepare Future Airline Pilots?	271
A Future Direction in Pilot Training	281
Training Pilot Instructors to Access CRM: The Utility of Frame-of-Reference (FOR) Training	291
Aviation Education for Future Airline Pilots: An Integrated Model	301
Session 5e. English Language Training	
When Better than Nothing Isn't Good Enough	311
Aspects of Technical English	321
English Language Training and Assessment: the Scope of the Issue	331
Restructuring and English for Specific Purposes (ESP) Aviation Curriculum: A Work in Progress	341
PEC Before PIC	351
Final Proceedings	
Training the AMT (A&P) in the New Millennium - A Reality Check	361
Teaching Effective, Practical Radio-Communication Skills in English: One Approach	371
Proposed Changes to Australia's Training and Licensing of Aircraft Maintenance Personnel	381
Continuing Flying Training by Means of Flight Operational Quality Assurance Program	391
Nonnative English-Speaking Pilots' Workload in L1 and L2 Airspace	401
Training in Incident Command	431
The Australian Day VFR Syllabus	441
Virtual Training Center (R)	551

International Aviation Training Symposium

September 28-30, 1999

Monday

9:00 a.m. - 5:00 p.m.	Set up exhibits
12:00 p.m. - 8:00 p.m.	Registration
6:30 p.m. - 8:30 p.m.	Ice Breaker William E. Traylor – Welcome Program Director FAA Academy Oklahoma City, OK, US Willa Johnson – Welcome Oklahoma City Vice Mayor Oklahoma City, OK, US

Tuesday

7:30 a.m. – 5:00 p.m.	Registration
7:30 a.m. – 9:00 p.m.	Exhibits Open
7:30 a.m. – 8:30 a.m.	Continental Breakfast in the Exhibition Hall
8:30 a.m. – 9:45 a.m.	Opening Ceremony in Century Ballroom William E. Traylor – Welcome Program Director FAA Academy Oklahoma City, OK, US Lindy Ritz – Welcome Director, Mike Monroney Aeronautical Center Federal Aviation Administration Oklahoma City, OK, US Jane Garvey – Welcome Administrator Federal Aviation Administration Washington, DC, US Fanny Rivera - Welcome Assistant Administrator for Civil Rights Federal Aviation Administration Washington, DC, US Dr. Assad Kotaite - Welcome President of the ICAO Council Montreal, Quebec, Canada
9:45 a.m. - 10:15 a.m.	Break Refreshments in the Exhibition Hall

Tuesday (continued)

10:15 a.m. - 12:00 p.m.	Technical Session #1: Training in the 21st Century Panel Presentations in Century Ballroom	Panel Moderator: <i>Robert E. Igo</i> Deputy Program Director FAA Academy United States <i>Laura Donohoe</i> ATMD, NATS, Bournemouth Airport Christchurch, Dorset, UK <i>Lloyd Brown</i> CATC, NATS Bournemouth Airport Christchurch, Dorset, UK
	Panel Presentations: “Human Factors Support to Training for Future Air Traffic Controllers”	
	“Human Resources and Training Needs Task Force (CNS/ATM)”	<i>Juan Barla</i> , AT Coordinator Direccion General de Infraestructura Aeronautica Montevideo, Uruguay
	“Development of Safety Management for Civil Aviation of China”	<i>Duan Jiyan</i> , President Civil Aviation Management Institute of China Beijing, China
12:00 p.m. – 1:30 p.m.	Lunch at Myriad, Ballroom 2 nd Floor	<i>Patrick N. Poe</i> - Speaker Alaska Regional Administrator Federal Aviation Administration Anchorage, AK, US
1:30 p.m.	Technical Session #2: Key Managerial Aspects to Effective Training Programs Panel Presentations in Century Ballroom	Panel Moderator: <i>John C. Barner</i> Vice President for Institutional Advancement Oklahoma City University Oklahoma City, OK, US
1:30 p.m. – 2:45 p.m.	Panel Presentations: “Civil Aviation Training in Brazil”	<i>Col.-Eng. Allemander J. Pereira</i> , C.Eng., M. Eng., Ph.D Director of the Institute of Civil Aviation Rio de Janeiro, Brazil
	“Centre of Excellence in Air Traffic Management (ATM) Training”	<i>U. H. Blunier</i> Director Institute of Air Navigation Services EUROCONTROL Luxembourg
	“Intricacies of Formulating Aviation Training Strategies in a Community of Developing Economies; The Case of SADC”	<i>Omari R. Nundu</i> SADC Technical Advisor Southern African Development Community Maputo, Mozambique

Tuesday (continued)

Technical Session #2 (continued)

	“Raising The Bar of Performance in the FAA: Applying A Systems Thinking Approach”	<i>Lindsey C. Smith, Ed.D</i> Program Manager, Federal Aviation Administration Center for Management Development Palm Coast, Florida, US
2:45 p.m. – 3:15 p.m.	Break <i>Refreshments in the Exhibition Hall</i>	
3:15 p.m. – 5:00 p.m.	Technical Session #2: Workshop	<i>Benton L. Berry</i> FAA Academy
5:30 p.m.	Buses Depart from Lobby	
6:00 p.m. – 8:30 p.m.	Welcome Reception at Phillip’s Pavilion at Governor’s Mansion	<i>Frank Keating – Welcome</i> Oklahoma Governor

Wednesday

7:30 a.m. – 5:00 p.m.	Registration	
7:30 a.m. – 9:00 p.m.	Exhibits Open	
7:30 a.m. – 8:30 p.m.	Continental Breakfast in the Exhibition Hall	
8:30 a.m.	Technical Session #3: Funding Strategies to Support Aviation Training Panel Presentations in Century Ballroom	Panel Moderator: <i>Lt. General (ret.) Richard A. Burpee</i> Director of Aviation & Aerospace Development Oklahoma City Chamber of Commerce Oklahoma City, OK, US
8:30 a.m. – 9:45 a.m.	Panel Presentations: “Funding Strategies For China’s Civil Aviation and Education Training”	<i>Gao Yukun</i> Administrator, Training Project Office Civil Aviation Management Institute of China, Beijing, China
	“Training For The Future CNS/ATM”	<i>Joseph M. Del Balzo</i> President JDA Aviation Technology Solutions Washington, DC, US
	“The IATA ATC Enhancement & Financing Service and Funding Aviation Training”	<i>Dennis S. Terao</i> Director, Industry Monetary Affairs Services IATA Switzerland
	“Training & Equipment Funding – A Case Study”	<i>James S. Cox</i> Director, Corporate Treasury Department Northrop Grumman Baltimore, MD, US

Wednesday (continued)

9:45 a.m. – 10:15 a.m.	Break Refreshments in the Exhibition Hall	
10:15 a.m. – 12:00 p.m.	Technical Session #3: Workshop	<i>James S. Cox</i> Northrop Grumman
12:00 p.m. – 1:30 p.m.	Lunch at Myriad, Ballroom 2 nd Floor	<i>James B. Armor, Jr. - Speaker</i> Brigadier General Select System Program Director U.S. Air Force Los Angeles, CA, US
1:30 p.m.	Technical Session #4: Regional Training Programs; Facility, Instructor and Materials Resource Sharing Panel Presentations in Century Ballroom	Panel Moderator: <i>Benton L. Berry</i> International Training Manager FAA Academy Oklahoma City, OK, US
1:30 p.m. – 2:45 p.m.	Panel Presentations: “Total Teamwork in Training Development”	<i>Paul DeBenedittis</i> Air Traffic Control Instructor FAA Academy Oklahoma City, OK, US
	“Using A Global Team to Improve International Aviation Safety Oversight”	<i>Gail A. Williams</i> Instructional Systems Specialist FAA Academy Oklahoma City, OK, US
	“Meeting the Global Need for Qualified Civil Aviation Personnel through International Cooperations: An ICAO Perspective”	<i>Mitchell A. Fox</i> Chief, TRAINAIR Central Unit ICAO Montreal, Quebec, Canada
	“Creating Regional Training Programs: A Less Developed Countries’ Perspective”	<i>Ollie Moakofi</i> Senior Airworthiness Inspector Department of Civil Aviation Gaborone, Botswana
	“Establishing International Training Partnerships”	<i>Johan Swemmer</i> General Manager Air Traffic Navigation Services Johannesburg, South Africa
2:45 p.m. – 3:15 p.m.	Break Refreshments in the Exhibition Hall	
3:15 p.m. – 5:00 p.m.	Technical Session #4 Workshop	<i>Dr. S. Vincent Massimini</i> The MITRE Corporation
Wednesday Evening	Hospitality Night	

Thursday

7:30 a.m. – 2:00 p.m.	Registration
7:30 a.m. – 5:30 p.m.	Exhibits Open

Thursday (continued)

7:30 a.m. – 8:30 a.m.	Continental Breakfast in the Exhibition Hall	
8:30 a.m. – 12:00 p.m.	Technical Session #5: Specific Applications in Training Technologies, Training Methodologies, Aviation Research, Pilot Training & English Language Training	
8:30 a.m. – 9:30 a.m.	<i>Five concurrent sessions:</i>	
9:45 a.m. – 10:45 a.m.	<i>Delegates choose to attend three</i>	
11:00 a.m. – 12:00 p.m.	<i>of the five one-hour sessions.</i>	
8:30 a.m. – 12:00 p.m.	Panel Presentations: Session 5a: Training Technologies in Plaza North	Moderator: <i>Judy Holcomb</i> Assistant Manager, Airway Facilities Division FAA Academy Oklahoma City, OK, US
	“Toward a National Training Program in Aviation Weather; A Major Step Toward Safer Skies”	<i>Lawrence Astor</i> Manager, Aviation Weather Training Program University Corporation for Atmospheric Research/COMET Program Boulder, CO, US
	“Developing Holistic Technology-Based Training Program”	<i>Simon Hsu</i> Instructional Systems Designer C ² Multimedia, Inc. Oklahoma City, OK, US
	“An Overview of the Federal Aviation Administration’s Interactive Video Teletraining Program”	<i>Rich Schrum</i> IVT Operations Manager FAA Academy Oklahoma City, OK, US
	“Simulation Coupled with CBT Creating a Comprehensive Training Tool that Increases Transfer”	<i>Kurt Sand</i> Software Engineer and Trainer DCS Corporation Alexandria, VA, US
		<i>Jason Schoenfelder</i> Instructional Designer DCS Corporation Alexandria, VA, US
	Session 5b: Training Methodologies in Plaza South	Moderator: <i>Al Mitchell</i> Manager, Airports & Logistics Division FAA Academy Oklahoma City, OK, US
	“Service Quality Improvements at Community Aerodrome Radio Stations in the Northwest Territories”	<i>Raymon J. Kaduck</i> Aviation Consultant Arctic Airports Government of the Northwest Territories Ottawa, ON, Canada
	“Aerotechnical Development and Pattern of Tertiary Education Envisaged for 21 st Century Chinese Aviation”	<i>Yang Guoqing</i> President Civil Aviation University of China Tianjin, China

Thursday (continued)

Technical Session 5b (continued)

“Training Issues Associated with the Advanced General Aviation Transportation Experiment (AGATE) & Small Aircraft Transportation System (SATS) Programs”

Dr. Steve Hampton
Professor of Aeronautical Science
Embry-Riddle Aeronautical University
Daytona Beach, FL, US

“Innovative Training Programs in Aviation Medicine”

Dr. Melchor J. Antuñano
Manager, Aeromedical Education Division
FAA Civil Aeromedical Institute
Oklahoma City, OK, US

Session 5c: Aviation Research in Red Carpet Country

Moderator:
Delinda L. Wall
Operations Branch Instructor
FAA Academy
Oklahoma City, OK, US

“Quality Management in Aviation Training”

Dr. Thorsten Hisam
Director, International Relations
Embry-Riddle Aeronautical University
Daytona Beach, FL, US

“Using an Internet-Based Decision Research System in Aviation Training Research”

Robert Mauro
Head of the Psychology Department
University of Oregon
Eugene, OR, US

“An Evaluation of Airplane Upset Recovery Training Programs”

Louis Knotts
Vice President
Veridian Flight Research Group
Buffalo, NY, US

“Basic English Language Proficiency for International ATC”

Henry Mogilka
ATC Instructor
FAA Academy
Oklahoma City, OK, US

Session 5d: Pilot Training in Green Country

Moderator:
Thomas Accardi
Program Director
Aviation System Standards, FAA
Oklahoma City, OK, US

“Approaches to Learning: Is there a Better Way to Prepare Future Airline Pilots?”

Dr. Henry R. Lehrer
Professor, Aviation Institute
University of Nebraska at Omaha
Omaha, NE, US

“A Future Direction in Pilot Training”

Ronald L. Small
Director of Business Development
SimAuthor, Inc.
Boulder, CO, US

“Training Pilot Instructors to Access CRM: The Utility of Frame-of-Reference (FOR) Training”

Dr. David P. Baker
Senior Research Scientist
American Institutes for Research
Washington, DC, US

Thursday (continued)

Technical Session 5d (continued)

“Aviation Education for Future Airline Pilots:
An Integrated Model”

Dr. Merrill R. Karp
Assistant Professor
Arizona State University
Mesa, AZ, US

Session 5e: English Language Training in Century Ballroom

Moderator:
Ned Reese
Manager, Air Traffic Division
FAA Academy
Oklahoma City, OK, US

“When Better than Nothing Isn’t Good Enough”

Gail Reed
Manager, ATC Communications
Pan Am International Flight Academy
Miami, FL, US

“Aspects of Technical English”

Shelly Greaves
E.S.L. Instructor/Designer of Edu-Systems
Jump Start
Fregene Roma, Italy

“English Language Training and Assessment:
the Scope of the Issue”

Elizabeth Mathews
Director, English Language Institute
Embry-Riddle Aeronautical University
Daytona Beach, FL, US

“Restructuring an English for Specific Purposes (ESP)
Aviation Curriculum: A Work In Progress”

Robert L. Chatham
Chief, Specialized Curriculum
Defense Language Institute English
Language Center
Lackland AFB, TX, US

“PEC Before PIC”

Dr. Marjo Mitsutomi
Professor, University at Redlands
Vice President, M.I. Air Corporation
Redlands, CA, US

12:00 p.m. – 1:00 p.m.

Lunch

1:00 p.m. – 5:00

Technical Session #6: Mike Monroney Aeronautical Center Tours

6:30 p.m. – 9:30 p.m.

Oklahoma Country-Western International Banquet

Mary Fallin - Speaker
Oklahoma Lt. Governor
Oklahoma City, OK, US

Bryan O’Connor – Keynote Speaker
Futron Corporation and
Former US Astronaut
Washington, DC, US